

Impairment Summary

Assessment Unit	Stream Name	Length (miles)	Boundaries	Cause
VAW-L03R_ROA01A00	Roanoke River	1.20	Roanoke River mainstem from the Mason Creek mouth upstream to the Rt. 419 Bridge.	Unhealthy Aquatic Life
VAW-L03R_ROA02A00	Roanoke River	2.67	Roanoke River mainstem from the Rt. 419 Bridge upstream to the City of Salem downtown intake on the Roanoke River.	Unhealthy Aquatic Life
VAW-L04R_ROA01A00	Roanoke River	3.14	Roanoke River mainstem waters from Niagara Dam downstream to the mouth of Back Creek (PWS section 6i).	Unhealthy Aquatic Life
VAW-L04R_ROA03A00	Roanoke River Niagara	0.87	Roanoke River mainstem from near the backwaters of the Niagara Impoundment upstream to the end of the WQS designated public water supply (PWS section 6i) segment. The upstream ending of the PWS segment from SML 795 ft. pool elevation.	Unhealthy Aquatic Life
VAW-L04R_ROA04A00	Roanoke River	0.25	Roanoke R. mainstem from near the backwaters of Niagara Impoundment upstream to the Tinker Creek confluence on the Roanoke River (section 6). The upstream ending of the WQS designated public water supply (PWS) segment from SML 795 ft. pool elevation.	Unhealthy Aquatic Life
VAW-L04R_ROA05A00	Roanoke River	0.35	Roanoke River mainstem from the Western Virginia Water Authority Roanoke Regional Water Pollution Control Plant downstream to the Tinker Creek confluence (WQS section 6).	Unhealthy Aquatic Life
VAW-L04R_ROA06A00	Roanoke River	4.34	Roanoke River mainstem from the Murray Run mouth downstream to the Western Virginia Water Authority Roanoke Regional Water Pollution Control Plant.	Unhealthy Aquatic Life
VAW-L04R_ROA07A00	Roanoke River	3.32	Roanoke River mainstem from the Peters Creek mouth downstream to the Murray Run confluence on the Roanoke River.	Unhealthy Aquatic Life
VAW-L04R_ROA08A02	Roanoke River	2.22	Roanoke River mainstem from the Mason Creek mouth downstream to the confluence of Peters Creek on the Roanoke River.	Unhealthy Aquatic Life

Land Use Distribution (NLCD 2006)

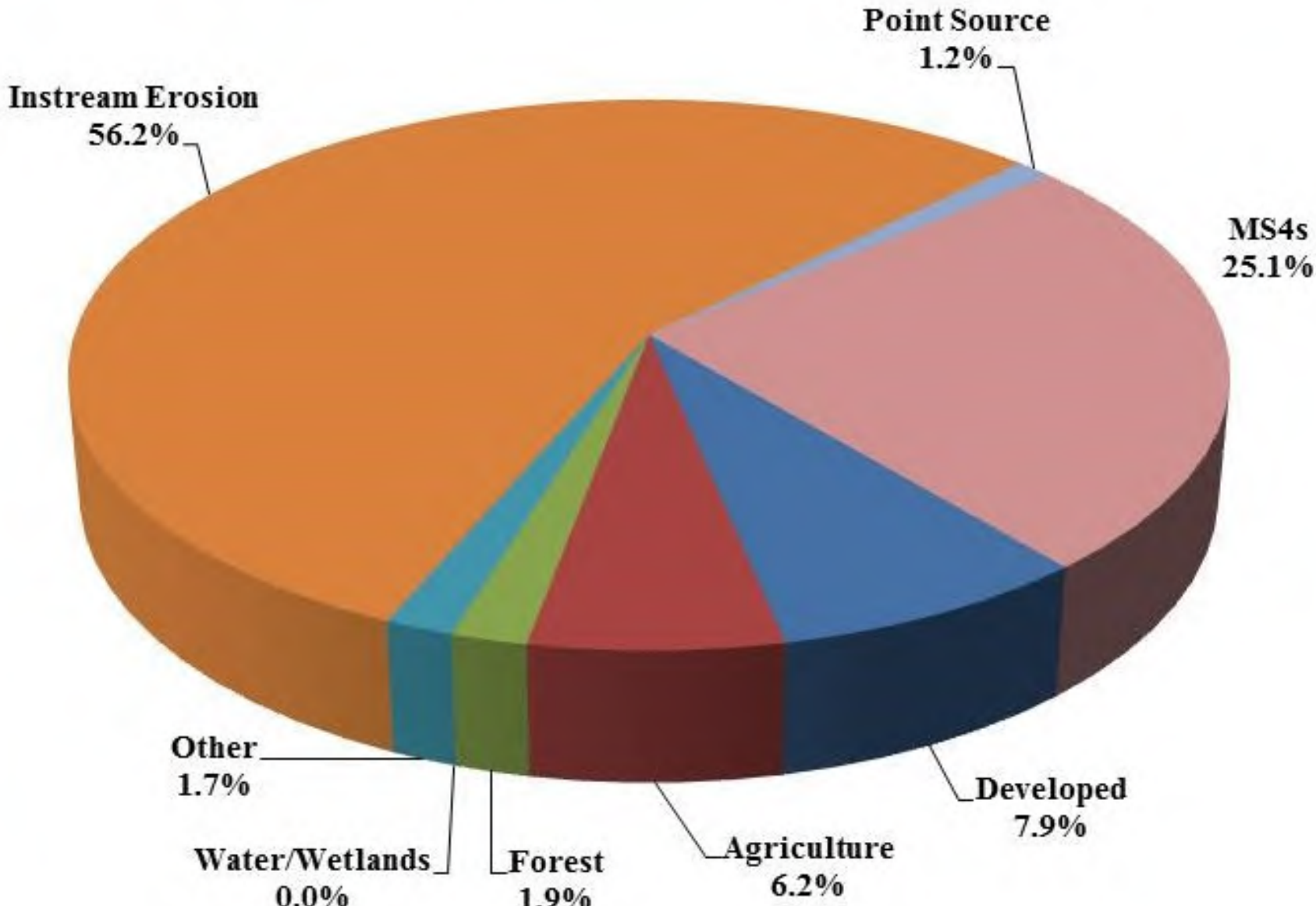
Land Use Category	Area	
	Acres	Percent
Developed	11,411.7	65.4%
Agriculture	385.1	2.2%
Forest	5,421.6	31.1%
Water/Wetlands	38.7	0.2%
Other	182.2	1.0%
Total	17,439.3	100.00%

Existing and Allocated Sediment Loads

Land Use/Source	Total Annual Sediment Loads (tons/yr)		Percent Reduction (%)
	Existing Load	Allocation Load	
Land Based Non-point			
Developed	4,079.3	994.5	75.6%
Agriculture	3,209.9	782.6	75.6%
Forest	966.9	966.9	0.0%
Water/Wetlands	0.0	0.0	0.0%
Other	868.1	211.6	75.6%
Direct Non-point			
Instream Erosion	29,178.4	7,113.7	75.6%
Point Source	615.3	615.3	0.0%
MS4s	13,040.9	3,218.3	75.3%
Total	51,958.8	13,902.9	73.2%

*The Existing and Allocated Loads reflect the loads for the entire watershed upstream of the outlet

Existing Sediment Load Distribution



Existing Best Management Practices Agricultural and Stormwater

Agricultural Best Management Practice	Count	Area Treated	Streamlength Protected (ft)
Small Grain cover crop for Nutrient Management	2	15.9	N/A

Stormwater Best Management Practice	Count	Reported Area Treated* (acres)
Bioretention	4	No Data
Detention Basin	40	756.3
Extended Detention Basin	2	32.2
Infiltration	4	No Data
Manufactured Unit	2	0.6
Sediment Forebay	1	28.5
Retention Pond	1	5.6
Underground Detention Basin	10	3.7

*Not all Best Management Practices reported area treated

The municipalities are in the process of creating Best Management Practices inventories, so not all Best Management Practices present in the watershed may be reported.

Potential Implementation Actions to Reduce Sediment

- Existing Best Management Practice Retrofits
- Low Impact Development Stormwater Controls
- Riparian Buffer Creation/Expansion
- Street Sweeping
- Stream Bank Protection and Stabilization